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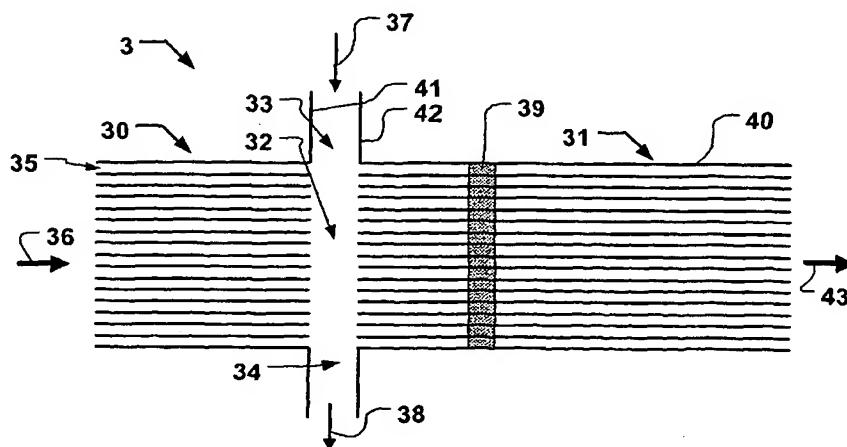
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(54) Title: **FLUID PARTITIONING IN MULTIPLE MICROCHANNELS**



(57) Abstract: A device (3) and method to generate independent fluid samples (51) for multichannel analysis, preferably in diagnostic cartridges, are disclosed according to the invention. A fluidic device (3), preferably a microfluidic device, has a plurality of fluid channels (35). Fluids are transported in the fluid channels. A cross-over channel (32) has a fluid inlet (33) and a fluid outlet (34). In use of said device (3), a method is performed. According to the method, the sample channels are filled with sample fluid up to a threshold (39). A flush fluid (gas or inert liquid) is then flushed through the sample-filled cross-over channel, replacing the sample fluid with flush fluid. Subsequently the cross-over channels' inlet and outlet are closed and the sample fluid is pushed further into the channel arrays (30, 31). Alternatively, an appropriate pressure is applied to the fluid in order to push the fluid into said sample channels. The method steps are repeated in an appropriate way if it is desired to obtain multiple (in time and/or space) independent sample plugs in the microchannels. Thus a series of longitudinally spaced independent sample fluid segments separated from each other by flush segments is created in each microchannel.

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B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 540 896 B1 (MANZ ANDREAS ET AL) 1 April 2003 (2003-04-01) column 2, line 66 - column 6, line 65; figures 1-3 column 9, line 27 - column 10, line 56	1-8, 13-16
X	US 2002/195463 A1 (ENDO ISAO ET AL) 26 December 2002 (2002-12-26) paragraphs '0008! - '0032!; figures 5-11	1-4, 6-9, 11-24
X	US 6 117 396 A (DEMERS ROBERT RICHARD) 12 September 2000 (2000-09-12) the whole document	1-4, 6-9, 11-24
A	US 2003/005967 A1 (KARP CHRISTOPH D) 9 January 2003 (2003-01-09) the whole document	1-24

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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